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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/576,992	05/24/2000	Vincenzo Arcella	108910-00006	4767

7590

05/17/2002

Arent Fox Kintner Plotkin & Kahn PLLC
Suite 600
1050 Connecticut Avenue NW
Washington, DC 20036-5339

EXAMINER

FORTUNA, ANA M

ART UNIT	PAPER NUMBER
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1723

13

DATE MAILED: 05/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

TC-13

Office Action Summary

Application No.

09/576,992

Applicant(s)

Arcella

Examiner

Ana Fortuna

Art Unit

1723



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Feb 28, 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 17-28 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 17-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Claims 1-7, 17-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, the term "porosity in the range 5-500 nm" is unclear as to whether pore size distribution is intended. The porosity is defined in the art as "as a ratio of the volume occupied by pores to the entire volume of the porous material". This rejection was discussed in paper No.10, paragraph 11, lines 11-13, and considered proper. Claim 2 is redundant, since its limitations have been included in claim 1, the claim should be canceled. Claim 3 is unclear as to what is intended. In claim 3, the (per) fluorinated polymers group are not clearly separately grouped in the claim. A Markush group should state "selected from the group consisting of A, B, and C", which construction does not appear in the claim. In claim 3, the terms "with one or more comonomers...(I)", is unclear as to whether a copolymers of the formulas II and I is intended as one of the groups.

2. Claim 5 recites the limitation "dioxole" in line 2. There is insufficient antecedent basis for this limitation in the claim.

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Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 3, 7, 18-20, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banerjee (5,795,668)('668). Reference '668, discussed in paper No. 10, an applied as 102, which rejection is now changed to 103 rejection discloses the membrane made of the claimed composition of perfluorinated polymers, and supported on a microporous support. '668 fails to disclose the pore size distribution between the claimed range or the final porosity of lower than 5 nm (0.005 micrometers). Reference '668 teaches, however, the membrane made from a composition having between 0.05 to 50 % of the polymer, and preferably from 1 to 10 %, and the polymer layer as porous layer, and the support is selected to have pores between 0.05 to 10 micrometers (abstract, column 7, second paragraph, column 8, fourth paragraph). The method of coating the support and reducing the pores of the support by coating the polymer solution, and drying the coated solution is also disclosed (column 8, lines 49-68). In Applicant's specification similar composition and process is disclosed. Therefore, based on the teaching of '668, it would have been obvious to one skilled in the art at the time the invention was made to produce a membrane with pores within the claimed range (e.g. ultrafiltration membranes) by controlling the

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amount of polymer in the perfluoropolymer composition, since the pore coating of the microporous support will depend on the solution viscosity. The reduction in porosity of the support, or the porosity of the final membrane can be predicted from the final pore size, e.g. the more coated the support pores, less volume of pore will be available, therefore, depending on the composition of the polymer solution, and the final pore size desired, the reduction of pore volume from the initial 50 to 95 % to 80-90 %, should be within the knowledge of the skilled artisan, at the time the invention was made.

Response to Arguments:

5. Applicant argues with regard to the references that the membrane is made by a particular process (paper No.12, page 9, last paragraph), the claims are directed to a product, and not to a process, or product by process, in which the process is capable of producing a particular product distinct from the prior art. Therefore, since the limitation of the product are disclosed in the prior art, the rejection is maintained, however is been changed to a 103 rejection. The rejection over Flottman and Resnick have been withdrawn.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana Fortuna whose telephone number is (703) 308-3857. The examiner can normally be reached on Monday-Friday from 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached on (703) 308-0457. The fax phone number for the organization

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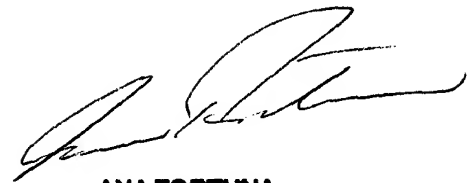
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where this application or proceeding is assigned is (703) 872-9310 for regular responses, and
(703)872-9311 for after finals.

Ana Fortuna

May 16, 2002

A handwritten signature in black ink, appearing to read 'Ana Fortuna', with a stylized, cursive script.

**ANA FORTUNA
PRIMARY EXAMINER**